

PATENT COOPERATION TREATY

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference 2960/138WO	FOR FURTHER ACTION <small>see Form PCT/ISA/220 as well as, where applicable, Item 5 below.</small>	
International application No. PCT/US2007/064349	International filing date (day/month/year) 20/03/2007	(Earliest) Priority Date (day/month/year) 21/03/2006
Applicant CONFORMIS, INC.		

This international search report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This international search report consists of a total of 8 sheets.

☒ It is also accompanied by a copy of each prior art document cited in this report.

1. Basis of the report

a. With regard to the language, the international search was carried out on the basis of:

- ☒ the international application in the language in which it was filed
☐ a translation of the international application into _____, which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1(b))

b. ☐ With regard to any nucleotide and/or amino acid sequence disclosed in the international application, see Box No. I.

2. ☒ Certain claims were found unsearchable (See Box No. II)

3. ☒ Unity of invention is lacking (see Box No. III)

4. With regard to the title,

- ☒ the text is approved as submitted by the applicant
☐ the text has been established by this Authority to read as follows:

5. With regard to the abstract,

- ☐ the text is approved as submitted by the applicant
☒ the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box No. IV. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority

6. With regard to the drawings,

- a. the figure of the drawings to be published with the abstract is Figure No. 2F
☒ as suggested by the applicant
☐ as selected by this Authority, because the applicant failed to suggest a figure
☐ as selected by this Authority, because this figure better characterizes the invention
b. ☐ none of the figures is to be published with the abstract

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US2007/064349

Box No. IV Text of the abstract (Continuation of item 5 of the first sheet)

A method of preparing an interpositional implant suitable for a knee. The method includes determining a three-dimensional shape of a tibial surface of the knee. An implant (200) is produced having a superior surface (202) and an inferior surface (204), with the superior surface adapted to be positioned against a femoral condyle of the knee, and the inferior surface adapted to be positioned upon the tibial surface of the knee. The inferior surface conforms to the three-dimensional shape of the tibial surface. The implant may be inserted into the knee without making surgical cuts on the tibial surface. The tibial surface may include cartilage, or cartilage and bone.

INTERNATIONAL SEARCH REPORT

International application No

PCT/US2007/064349

A. CLASSIFICATION OF SUBJECT MATTER

INV. A61F2/30 A61F2/38 A61F2/46

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

A61F

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	EP 1 327 423 A1 (CT PULSE ORTHOPEDICS LTD [CH] ZIMMER GMBH [CH]) 16 July 2003 (2003-07-16) paragraph [0020] - paragraph [0021] paragraph [0032] - paragraph [0037] figures 1,2,4,6-8	1,4-9, 12, 94-104
X	US 2004/133276 A1 (LANG PHILIPP [US] ET AL) 8 July 2004 (2004-07-08) paragraph [0136] figures 8K,8L	1-4,7-9, 12, 94-104

☒ X

Further documents are listed in the continuation of Box C.

☒ X

See patent family annex.

* Special categories of cited documents :

- *A* document defining the general state of the art which is not considered to be of particular relevance
- *E* earlier document but published on or after the international filing date
- *L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- *O* document referring to an oral disclosure, use, exhibition or other means
- *P* document published prior to the international filing date but later than the priority date claimed

- *T* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- *X* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- *Y* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- *A* document member of the same patent family

Date of the actual completion of the international search

4 October 2007

Date of mailing of the international search report

12/10/2007

Name and mailing address of the ISA/

European Patent Office, P.B. 5818 Patentlaan 2
NL - 2280 HV Rijswijk
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,
Fax (+31-70) 340-3016

Authorized officer

Storer, John

6

INTERNATIONAL SEARCH REPORT

International application No
PCT/US2007/064349

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 2005/051239 A (CONFORMIS INC [US]; LANG PHILIPP [US]) 9 June 2005 (2005-06-09) paragraph [0055] - paragraph [0061] paragraph [0077] - paragraph [0078] paragraph [0095] - paragraph [0096] claims 1,2	24-29, 31-41, 43-48, 51,52, 54,55
Y	figures 9,10,12D,13(3)A-E	30,42, 49,50,53
Y	WO 03/061522 A2 (ADVANCED BIO SURFACES INC [US]; FELT JEFFREY C [US]; RYDELL MARK A [US]) 31 July 2003 (2003-07-31) abstract page 27, line 16 - line 21 claims 1,3,4 figure 1a	30,42, 49,50,53

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US2007/064349

Box II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☒ Claims Nos.: 105-108
because they relate to subject matter not required to be searched by this Authority, namely:
Rule 39.1(iv) PCT - Method for treatment of the human or animal body by surgery
2. ☐ Claims Nos.:
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this International application, as follows:

see additional sheet

1. ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☒ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
1-12, 24-55, 94-104
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☒ No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 1-12,94-104

An implant interposed in a joint between a first articular surface and a second articular surface, the implant comprising:
a first surface for contacting the first articular surface such that motion of the implant is constrained; and
a second surface for contacting the second articular surface, the second surface allowing movement of the second articular surface.

2. claims: 13-23,56-65

An implant for insertion in a joint having a first articular surface, the implant comprising:
a first implant surface conforming to the first articular surface, the first articular surface including cartilage.

3. claims: 24-55

An implant for insertion in a joint between a first articular surface and a second articular surface, the implant comprising:
a first implant surface for engaging the first articular surface, the first implant surface having one or more convexities and one or more concavities; and
a second implant surface for engaging the second articular surface, the second implant surface having at least one of a plurality of concavities and a plurality of convexities.

4. claims: 66-70

An interpositional implant suitable for a knee joint, the implant comprising:
a superior surface arranged to oppose at least a portion of a femur; and
an inferior surface arranged to oppose at least a portion of a tibial surface, wherein
the implant has a substantially U-shaped cross-section in at least one of a medial-lateral direction and an anterior-posterior direction.

5. claims: 71-76

FURTHER INFORMATION CONTINUED FROM PCT/SA/ 210

An interpositional implant suitable for a knee joint, the implant comprising:
a superior surface arranged to contact at least a portion of a femur;
an inferior surface arranged to contact at least a portion of a tibial surface, the superior surface and the inferior surface facing opposing directions and defining a thickness;
and
a peripheral edge extending between the superior and inferior surfaces, the greatest thickness at the peripheral edge being at least 2 mm more than the smallest thickness of the implant.

6. claims: 77-93

An implant for insertion in a joint between a first articular surface and a second articular surface, the implant comprising:
a first implant surface conforming to the first articular surface, the first articular surface including cartilage, the first implant surface having a periphery, the periphery including a stabilization mechanism for limiting motion of the implant in the joint; and
a second implant surface for contacting the second articular surface.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/US2007/064349

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
EP 1327423	A1	16-07-2003	AT 321510 T DE 60304233 T2	15-04-2006 18-01-2007
US 2004133276	A1	08-07-2004	NONE	
WO 2005051239	A	09-06-2005	AU 2004293091 A1 CA 2546958 A1 CN 1913844 A EP 1686930 A1	09-06-2005 09-06-2005 14-02-2007 09-08-2006
WO 03061522	A2	31-07-2003	CA 2473858 A1 JP 2005515810 T US 2004247641 A1	31-07-2003 02-06-2005 09-12-2004